

# **QUALITY GRAIN STORAGE**

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## **AGENDA**

**INTRODUCTION.**

**LOOKING AHEAD AND MARKET REQUIREMENTS.**

**PLANNING YOUR STORAGE SYSTEM.**

**GRAIN STORAGE INSECTS.**

**GRAIN AND STORAGE HYGIENE.**

**CHEMICALS AND THEIR USE.**

**SEALED STORAGE.**

**MOISTURE AND TEMPERATURE CONTROL.**

**INSPECTING STORED GRAIN.**

# **INTRODUCTION**

**GRAIN STORAGE IS NOT AN EASY OPERATION, A LOT CAN HAPPEN IN A SHORT TIME.**

**MARKET REQUIREMENTS ARE CHANGING REGULARLY AND SHOULD BE THE FIRST CONSIDERATION.**

**PLANNING YOUR STORAGE SYSTEM AND END MARKETS WILL HELP YOU TO BE SUCCESSFUL.**

**THINK AHEAD, WILL WHAT YOU ARE DOING NOW ALLOW YOU TO SUCCESSFULLY STORE GRAIN IN THE FUTURE GIVEN CHANGING MARKETS AND HOW YOU MAY CONTROL INSECTS.**

# **GRAIN STORAGE INSECTS**

**THERE ARE FOUR MAJOR INSECT PESTS**

**THE LESSER GRAIN BORER.**

**GRAIN WEEVIL.**

**SAW-TOOTHED GRAIN BEETLE.**

**RUST-RED FLOUR BEETLE.**

# **GRAIN AND STORAGE HYGIENE**

**PREVENTION IS BETTER THAN CURE.**

**KEEP GRAIN STORAGE AREAS CLEAN AND FREE OF CONTAMINANTS.**

**ENSURE STORAGE AREAS ARE EASY TO CLEAN AND ACCESS, AND ARE TREATED WITH A STRUCTURAL TREATMENT.**

**CONSIDER SEGREGATIONS OF GRAIN TYPES TO MINIMISE CROSS-CONTAMINATION.**

# GRAIN STORAGE CHEMICALS

**Always read the label**

**Always ensure your market accepts the chemicals you use regardless whether it is registered for use**

## **Registered products**

**Fenitrothion**    3 months rate has a 1 day withholding period (check product label you are using)  
9 months rate has a 90 day withholding period

**Actellic**        3-6 months rate has a 1 day withholding period

**Reldan**         3-6 months rate has a 1 day withholding period

**IGR**             3-9 months rate has a 0 day withholding period

***USE A MIXTURE OF ONE OF FENITROTHION, ACTELLIC OR RELDAN WITH IGR TO CONTROL ALL INSECTS***

***(For malting barley use only Fenitrothion and IGR check with market to be sure)***

**Dichlorvos**    6ppm rate to kill insects except the Lesser Grain Borer  
7 days withholding period

12ppm rate to control the Lesser Grain Borer  
28 days withholding period

**Phosphine**     Only use in sealed storage. Up to 25 days for fumigation, ventilation and withholding period, depending on the formulation.

# **GAS-TIGHT SEALED STORAGE**

**PROVIDES RESIDUE AND INSECT FREE STORAGE.**

**PROVIDES GREAT FLEXIBILITY.**

**MUST BE GAS-TIGHT SEALED, ALWAYS PRESSURE TEST SILO PRIOR TO USING.**

**ALWAYS USE PHOSPHINE SAFELY AND AT LABEL RATES.**

**MAINTAIN YOUR SILO TO ENSURE IT REMAINS GAS-TIGHT, CHECK SEALS REGULARLY AND REPLACE IF WORN OR DAMAGED.**

# **MOISTURE AND TEMPERATURE MANAGEMENT**

**MOISTURE AND TEMPERATURE HAVE A BIG  
INFLUENCE ON INSECT ACTIVITY, LIFE CYCLE,  
GRAIN QUALITY AND CHEMICAL ACTIVITY.**

**AERATION IS ONE WAY TO MANAGE  
TEMPERATURE AND MOISTURE.**

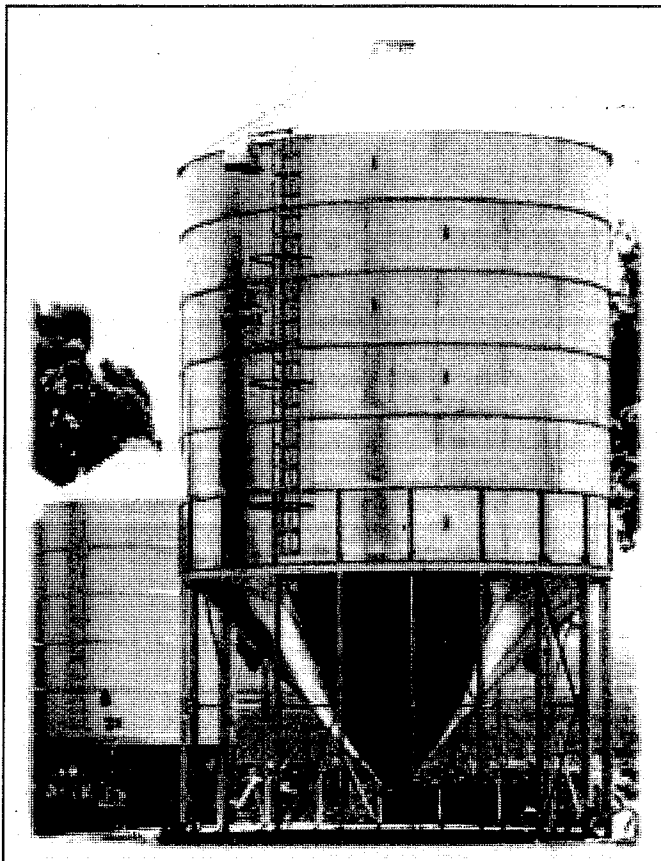
# **GRAIN STORAGE INSPECTION**

**INSPECT GRAIN REGULARLY WHEN IN STORAGE  
SO YOU CAN MANAGE ANY PROBLEMS THAT MAY  
ARISE.**

**INSPECT EVERY MONTH.**

**CHECK HATCHES AND CHUTES FOR ANY INSECTS  
AND IN THE TOP OF THE SILO PARTICULARLY ON  
THE NORTH-WEST SIDE.**

**SAMPLE GRAIN TO CHECK FOR ANY INSECTS.**





## **TAKE HOME MESSAGES**

**BE SURE YOUR STORAGE SYSTEM ALLOWS YOU TO MAINTAIN QUALITY AND CONTROL INSECTS TO MEET MARKET REQUIREMENTS NOW AND INTO THE FUTURE.**

**PLAN YOUR STORAGE SYSTEM AND WHAT YOU WANT TO ACHIEVE.**

**CLEANNESS IS THE KEY TO MINIMISING POTENTIAL PROBLEMS.**

**ALWAYS READ THE LABEL AND BE SURE ANY CHEMICALS USED ARE ACCEPTABLE TO THE END-USER, ARE USED AT LABEL RATES AND SPECIFICATIONS AND YOU MEET YOUR REGULATORY REQUIREMENTS,**

**WHERE POSSIBLE USE GAS-TIGHT SEALED STORAGE AND PHOSPHINE.**

**GAS-TIGHT SEALED STORAGE GIVES YOU GREAT MARKET FLEXIBILITY.**

**MAINTAIN YOUR GAS-TIGHT SEALED STORAGE, PRESSURE TEST SILOS BEFORE FILLING.**

**INSPECT YOUR GRAIN REGULARLY, KNOW WHAT IS GOING ON IN YOUR STORAGES.**

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PHILOSOPHY DEPARTMENT

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